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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,567	12/05/2003	Tomoyuki Ichikawa	Q78637	7986
23373	7590	08/09/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			NGUYEN, TUYEN T	
			ART UNIT	PAPER NUMBER
			2832	

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/727,567

Applicant(s)

ICHIKAWA ET AL.

Examiner

TUYEN T. NGUYEN

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Yamashita et al. [US 6,201,463 B1].

Yamashita et al. discloses a transformer [figure 1] comprising :

- a core including a first core part [50] and a second core part [60]; and
- a plurality of windings [30, 40] disposed between the first and second core parts;

wherein a projected portion [53] is formed on the first core part and the second core part is positioned to oppose to the projected portion;

- a gap [71] is formed between the second core part and a top end portion of the projected portion of the first core part; and

the windings are positioned at positions on an outer side of the projected portion except a position that surround the gap.

Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Grandmont et al. [US 5,949,321].

Grandmont et al. discloses a transformer [figures 1 and 3] comprising :

- a core including a first core part [36] and a second core part [38]; and

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- a plurality of windings [12, 14, 16] disposed between the first and second core parts;
wherein a projected portion [40] is formed on the first core part and the second core part is positioned to oppose to the projected portion;
- a gap [54] is formed between the second core part and a top end portion of the projected portion of the first core part; and

the windings are positioned at positions on an outer side of the projected portion except a position that surround the gap [figure 3].

Grandmont et al. discloses the windings formed of flat metal conductors.

Grandmont et al. further discloses that the first core includes outer leg portions [42].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grandmont et al. in view of Hsu et al. [US 6,707,366 B2].

Regarding claim 1, Grandmont et al. discloses the instant claimed invention except for the specific structure/arrangement of the windings.

Hsu et al. discloses an inductive device [figures 2a and 3c] comprising :

- a core structure having a first core part [310] and a second core part [320], wherein the first core part including a projected portion [figure 3c];

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- a plurality of windings [100, 200] which are flat wire [conductor] wound in a plurality of turns having ring-like portions and formed in an overlapping direction [figure 2a]

wherein the windings disposed around the projected portion of the first core, each of the windings having end terminal portions [110, 210], with a width between the terminal portions are differentiated.

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to use the winding structure of Hsu et al. in Grandmont et al. for the purpose of reducing thickness of the device.

Regarding claims 3 and 8, Grandmont et al. discloses the windings includes two primary windings [12, 14] and a secondary winding [16] disposed between the primary windings.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grandmont et al. in view of Hsu et al. as applied to claim 1 above, and further in view of JP 2973514 B2.

Grandmont et al. discloses the instant claimed invention except for for inclined surfaces formed in the projected portion.

JP 2973514 B2 discloses a transformer comprising a core structure including a central projection element [2] having an inclined surface [5].

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to inclined surfaces in the projected portion of Grandmont et al., as modified, as suggested by JP 2973514 B2, for the purpose of reducing leakage magnetic flux.

Response to Arguments

Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUYEN T. NGUYEN whose telephone number is 571-272-1996. The examiner can normally be reached on M-F 8:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ELVIN ENAD can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTN *TTN*

Junglin T. Nguyen